BEOLAB 5000

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HIGH-FIDELITY

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FREQUENCY
87 88 89 90 91 92 93 94 95 96 97 98 99 100 101 102 103 104 105 106 107 108 Mc
0 5 10 15 20 25 30 35 40 45 50 55 60 65 70 No
MONO
MUTING
AFC
POWER
BEOMASTER 5000
CHANNEL

THE BEOLAB 5000 SERIES

When B&O began experimenting with the BEOLAB 5000 High Fidelity Series almost three years ago we could not predict the price of a complete system of this type. We just told our laboratory staff to provide the Perfect High Fidelity System – and that is no easy task, for such a system must provide distinct, perfectly life-like reproduction of the entire tonal range – without the slightest distortion, without detracting anything from the incoming signal and without adding anything to it whatsoever. Our laboratory staff were happy to accept the challenge, and today you can see and hear the result: the BEOLAB 5000 series – the first Danish-built system with specifications exceeding international high-fidelity standards in every respect. So far, the series comprises a stereo amplifier of entirely new design, a separate FM stereo tuner, two specially designed pressure-chamber speakers, and a high-frequency sound diffuser. Obviously, the record player used with the BEOLAB 5000 series must meet the same high standards. The same applies to the tape recorder. The exact price of a BEOLAB 5000 system obviously depends on the number of individual instruments you wish to purchase for it, but it will be considerably higher than the prices of most conventional hi-fi systems. In return for the higher price you get the purest reproduction of music you have ever heard – and one of the most thrilling high-fidelity systems ever designed.

High fidelity means reproductions that comes as close to the original as possible, and since improvements in quality are constantly being made, the progress of technology will at any time determine whether a music system can qualify as a hi-fi system. Consequently it cannot be taken for granted that a hi-fi system from, say, the forties or the fifties meets today's standards of high fidelity. This seems to suggest that a hi-fi instrument is doomed to rapid obsolescence as new technological advances raise the standards. There is a risk, of course, but on the other hand the absolutely up-to-date high-fidelity system comes very close to what is attainable – and desirable, since it exceeds the limitations of the human ear on several points. In other words: the chances of obsolescence are smaller than ever.

In order to keep the subject in its proper perspective it is necessary to mention at this point that STEREO is sound transmitted through two channels, resulting in spatial reproduction – or you might say that stereo is music for both ears. A stereo system need not necessarily be a high-fidelity system – and, basically, a hi-fi system need not have provision for stereo (a most unlikely thing today).

When the old masters created musical instruments they judged their quality by ear. But the human ear is not good enough for today's designers of high-fidelity instruments – the performance of the many units between microphone and speaker can only be judged objectively through accurate measurements. The results of these measurements are listed in the comprehensive technical specifications normally supplied with a hi-fi system. The non-technically minded may find it difficult to interpret all these specifications – and strictly speaking this is not really necessary unless you wish to compare different systems or combine units of different makes.

However, some understanding of these things can be accomplished by studying some physiological facts relating to the ear.

The human ear cannot hear everything. It can only hear notes of frequencies between 20 and 20,000 cycles per second 20-15,000 would be nearer the mark (see Fig.). Of course, these limits vary from one person to the next, but a common feature is that the upper limit decreases with age.

Moreover, the ear is limited in the intensities or sound levels it can perceive. The lower limit is known as the threshold of audibility. Sounds below that level cannot be perceived by the ear. It will be seen from the diagram that the threshold of audibility varies with frequency. Maximum sensitivity occurs at approx. 3,000 cycles per second, dropping off sharply towards the lowest frequencies (the bass range). In the upward direction, the ability of the ear to perceive sounds is limited by the so-called threshold of pain. Sounds above that limit will cause pain and if very loud or constant may cause permanent damage to the ear. The threshold of pain is fairly independent of frequency and is approx. 120 dB above the threshold of audibility at 1000 cycles per second.

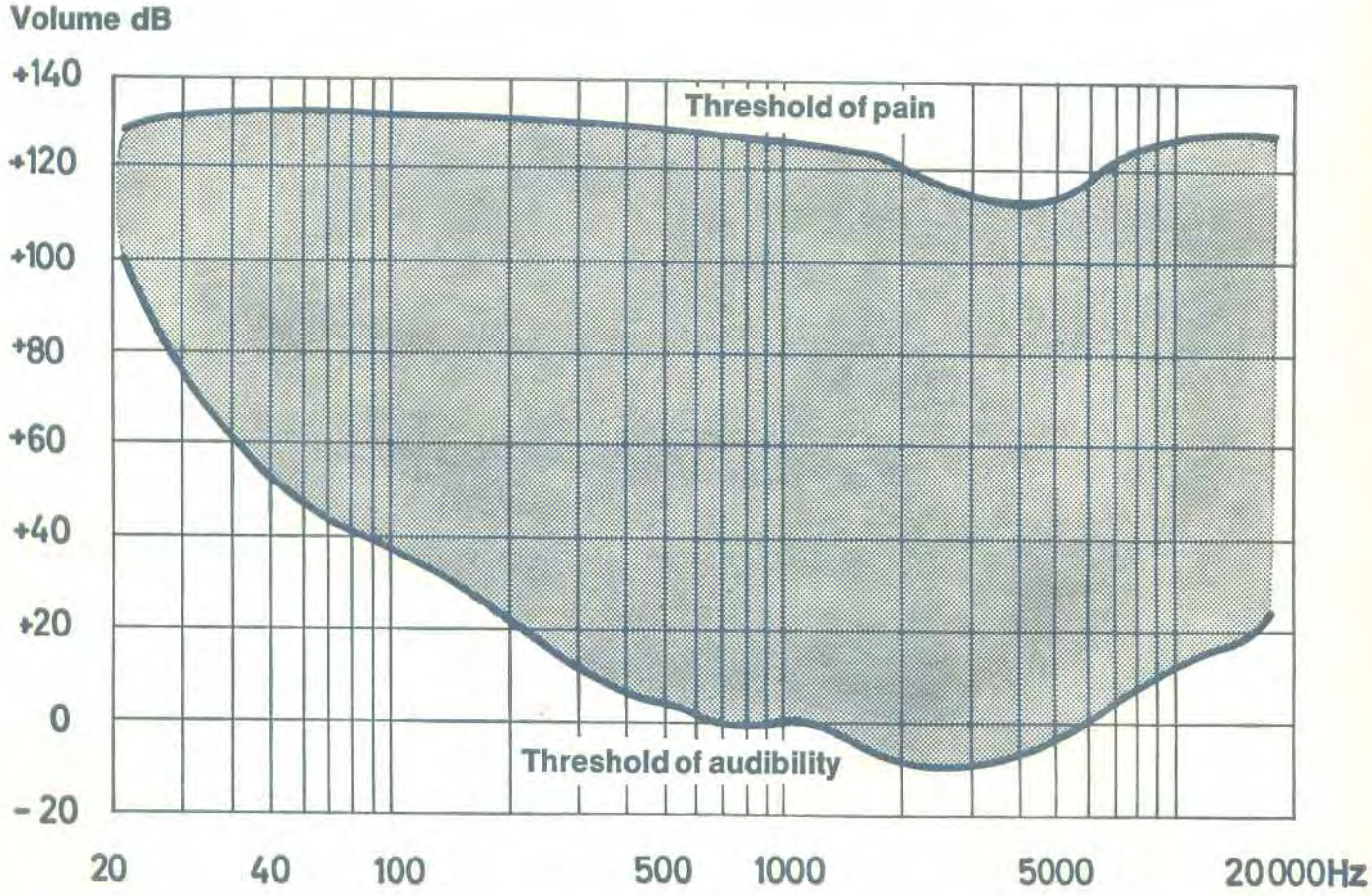
In other words: the area that can be perceived by the ear is limited in both frequency and intensity.

A high-fidelity system must be capable of reproducing this entire area of frequencies and intensities – without embellishing it and without adding anything whatsoever (paradoxically: a hi-fi system must reproduce absolutely no sound itself).

Firstly therefore the noise generated by the amplifier itself must be below the threshold of audibility. Secondly, the amplifier and speakers must be capable of reproducing all frequencies between 20 and 20,000 cycles per second – and this at an intensity approaching the ear's threshold of pain.

In order to be able to cover the entire

"Dynamic area of hearing" for average human ear.



audio frequency range with a loudspeaker of dimensions permitting its use in a normal room it is necessary to use a pressure-chamber type.

Loudspeakers of this type operate at efficiencies between 1 and 2 per cent (between 98 and 99 per cent of the electric power applied to a speaker is wasted in the conversion to sound-power). Consequently, in order to be able to produce full volume at all frequencies the amplifier must be capable of raising the level of efficiency to 100 per cent. This can be illustrated by the following example: A grand piano gives off close to 0.5 watt of sound-power during very loud passages. A simple calculation shows that, for a speaker efficiency of 1–2 per cent, the amplifier must deliver between 25 and 50 watts per channel in order to be able to reproduce the tones of the grand piano at full power.

Thus the high power output ratings of hi-fi amplifiers are not due to a tendency to carry technical specifications to rediculous extremes: they are dictated solely by the necessity to reproduce all notes at all intensities.

The loudspeakers – just like the amplifier – must be capable of reproducing all audio frequencies at even the loudest intensities and with low distortion. If this is to be accomplished with loudspeakers of reasonable dimensions it is necessary, as mentioned above, to use pressure-chamber techniques – that is, the speaker units must be mounted in airtight, damped enclosures. Moreover, the tonal range must be distributed among a number of special-purpose speakers: a low-frequency speaker (Bass), a mid-range speaker, and one or more high-frequency speakers (tweeters). Particularly the very low and the very high frequencies give rise to problems. Reproduction of the lowest frequencies at full volume requires speaker cones that can make very large excursions without being torn to pieces. This problem is solved through the use of free-edge cone suspensions of rubber or specially prepared cloth. The highest frequencies introduce another problem: a high-frequency speaker is highly directional, radiating sound inside a narrow area only. This problem can be solved by mounting several high-frequency speaker units in a so-called line scource form or through use of a special high-frequency diffuser which radiates sound equally in all directions and may be placed wherever convenient in the room. Reflections from the walls and ceiling will then effect uniform distribution of sound in the room.

It is of course an important condition, if real high-fidelity reproduction is to be realized, that the programme material you feed into the amplifier comes from a source that is absolutely free from distortion.

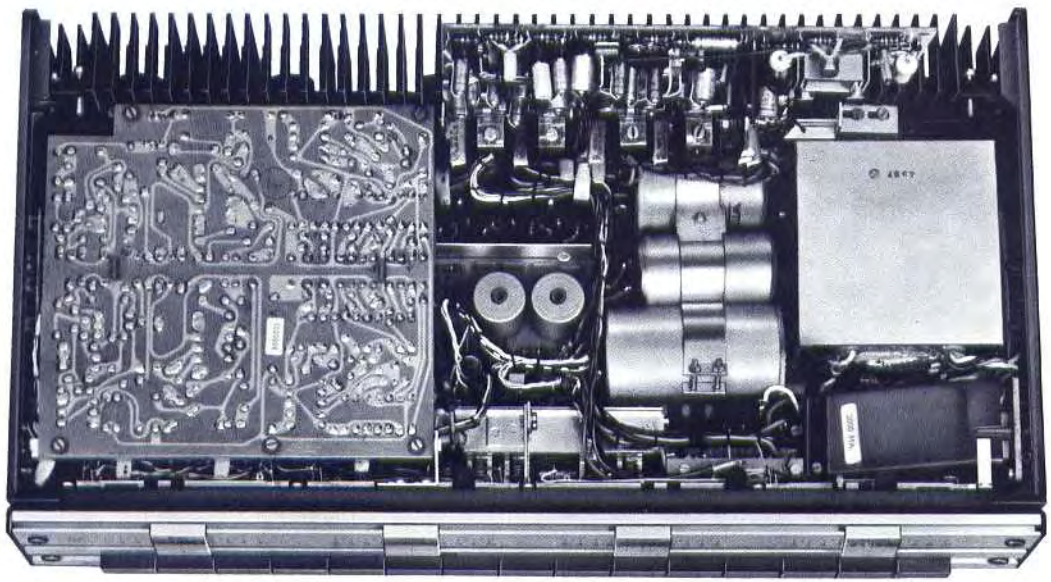
The usual programme source is a gramophone record. Excellent results will be obtained if a high-fidelity record player and a faultless record are used.

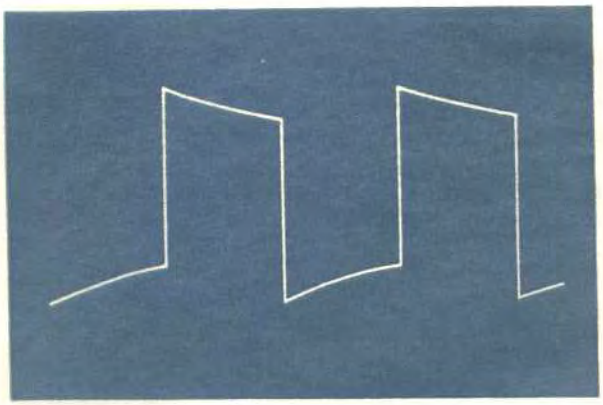
A tape recorder is another frequently used programme source. Here, too, it is true that only an advanced high-fidelity recorder using good-quality tapes and high tape speeds will produce a true high-fidelity signal.

BEOLAB 5000

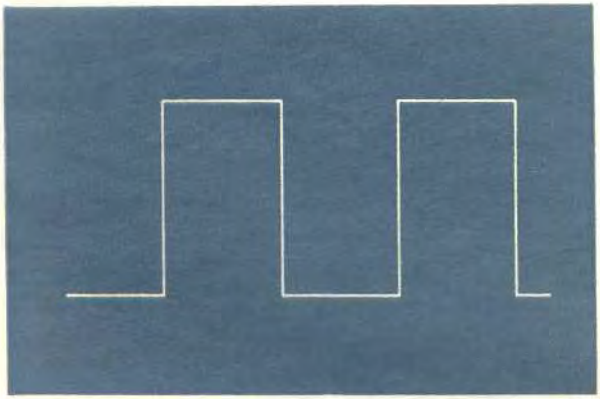
The BEOLAB 5000 is a silicon-transistor stereo amplifier with less than 0.6 per cent. distortion at all frequencies and volume levels up to 2×60 watts of power output. Its signal-to-noise ratio is better than 90 dB (linear measurement). It has calibrated graphic controls and is extremely versatile due to an comprehensive number of input and output facilities, filter-type tone controls, and a mode selector.

In other words, the Beolab 5000 is an amplifier that introduces no hiss or hum and reproduces all frequencies of the tonal range exactly as received. It has enormous power, permitting reproduction of even the loudest passages without the slightest distortion. Moreover, operation of the Beolab 5000 is logical and easy; varying or poor record quality can be compensated by means of efficient filters which remove the particular tonal range in which flaws are present; there is provision for connecting several loudspeakers, including a centre channel, as well as for individual channel monitoring. A special feature is a test control for adjusting balance between channels. The use of silicon transistors provides very low noise level, high temperature stability, and very wide frequency response.

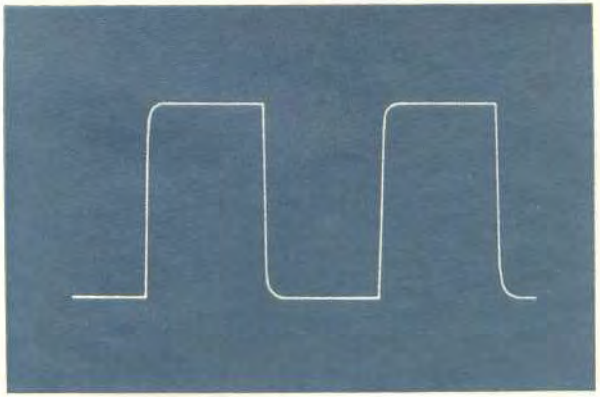




Square-wave signal
at output amplifier
R_{LOAD} = 4 ohms, 100 Hz



Square-wave signal
at output amplifier
R_{LOAD} = 4 ohms, 1 kHz



Square-wave signal
at output amplifier
R_{LOAD} = 4 ohms, 10 kHz

BEOLAB 5000, TECHNICAL DATA

Power Output:
120 watts (2×60 watts).
This amount of power can be delivered in the form of a 1 kHz sine-wave note for 10 min. with both channels driven simultaneously. (DIN 45500. B1.6.2.6.)

Speaker Impedance:
4 ohms.

Distortion:
Less than 0.2% at 1000 Hz.
Less than 0.6% at all frequencies from 20 to 20,000 Hz and at power outputs in excess of 60 watts on both channels simultaneously.
Volume control backed off 20 dB from max. setting.

Intermodulation:
Less than 1% when amplifier is driven to 2×60 watts at measuring frequencies of 250 and 8,000 Hz at 4:1 amplitude ratio. (DIN 45403 B1.4.)

Output Impedance:
Higher than 0.25 ohm.

Frequency Response:
20–20,000 Hz ±1.5 dB (for microphone 40–16,000 Hz ± 1.5 dB).

Signal-to-Noise Ratio:
Min. —90 dB below 60 watts with volume control at min..
Min. —58 dB below 50 mW at nominal input voltage and with volume control backed off for 50 mW output. (DIN 45500 B1.6.2.5) (for microphone min. —54 dB below 50 mW).

Crosstalk Attenuation between Channels:
Better than 45 dB and 1 kHz and better than 30 dB between 250 and 10,000 Hz (DIN 45500 6.2.4.1.)

Crosstalk Attenuation between Inputs:
Better than 60 dB at 1 kHz and better than 45 dB between 250 and 10,000 Hz (DIN 45500 B1.6.)

Signal-to-noise ratio and crosstalk attenuation measured with the following loads across the inputs:

MIC.: 200 ohms
PHONO HIGH: .0015 mfd.
PHONO LOW: Magnetic pick-up, 1200 ohms at 1 kHz.
TUNER HIGH: 50 k ohms
TUNER LOW: 100 k ohms
AUX.: 50 k ohms
TAPE: 50 k ohms.

Controls adjusted for nominal input sensitivities. Tone controls at level. Loudness off.

Bass Control Range:
± 17 dB at 50 Hz.

Treble Control Range:
±14 dB at 10 kHz.

Balance Control Range:
Min. 60 dB.

Rumble Filter: 70 Hz 15 dB per octave.

Scratch Filter:
6 kHz 18 dB per octave.

Channel variation:
Less than 3 dB over volume control range from 0 dB to —40 dB down.

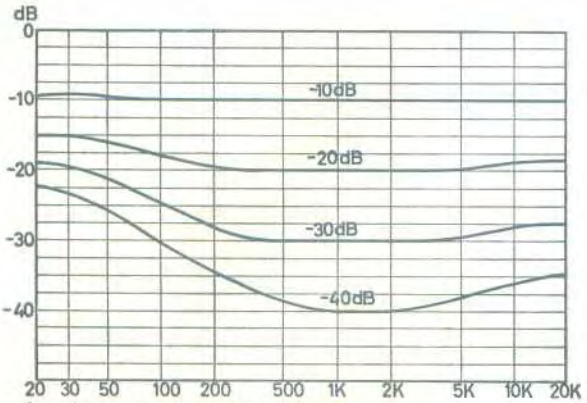
Input	Use	Curve	Input Impedance 100 Hz	Nominal Input Voltage (1)	Control Range	Maximum Input Voltage	Jack
MIC	Balanced Input for Microphone 200 ohms max.	Linear		200 μV	150 μV- 15 mV(2)	3.5 mV 15 mV	
PHONO HIGH	Crystal Pick-up and Line	Linear	1 m Ω	250 mV	200 mV- 4 V	5 V 5 V	DIN and phono
PHONO LOW	Magnetic Pick-up	IEC 2	47 k Ω	4 mV	1.3 mV- 14 mV	35 mV 120 mV	
TUNER HIGH	Radio Line	Linear	470 k Ω	250 mV	200 mV- 4 V	5 V 5 V	DIN and phono
TUNER LOW	Radio	Linear	47 k Ω	7 mV	6 mV- 200 mV	180 mV 5 V	
AUX	Line	Linear	470 k Ω	250 mV	200 mV- 4 V	5 V 5 V	DIN and phono
TAPE	Tape Recorder	Linear	470 k Ω	250 mV	200 mV- 7 V(2)	7 V 7 V	DIN and phono

Output	Impedance	Output Voltage or Power Input at Nom. Input Voltage	Max. Output Voltage or Power Output	Jack
TAPE(3)	4 k Ω	30 mV	0.9 V	DIN
LINE OUT	4 k Ω	30 mV	0.9 V	DIN
LINE OUT	2 k Ω	350 mV	7 V	phono
SPKRS 1–2	4 Ω(3)	2×60 watts	2×60 watts	2×DIN
SPKRS 1–2	8 Ω(3)	2×40 watts	2×40 watts	2×DIN
SPKRS 1–2	16 Ω(3)	2×20 watts	2×20 watts	2×DIN
CENTRE	8 Ω(3)	120 watts	120 watts	DIN

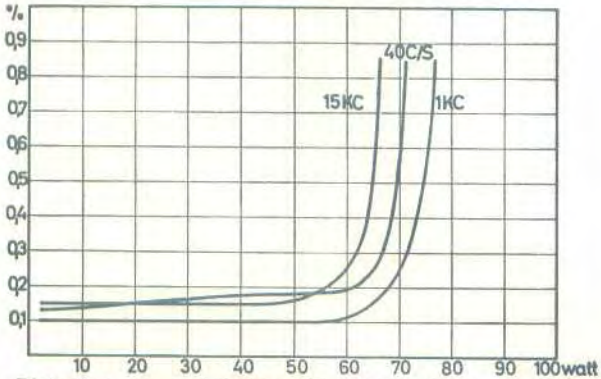
(1) Nominal input voltage is the voltage producing full power output with volume control at maximum. Data listed are for nominal input voltage, adjusted with screw-driver operated controls accessible through bottom plate of amplifier.

(2) May be set for higher voltage, but maximum input voltage must not exceed the values listed.

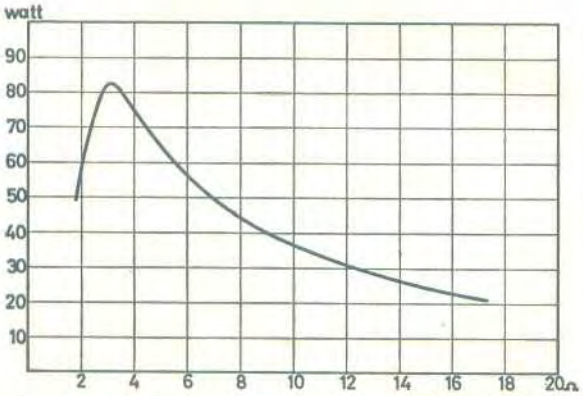
(3) The speaker impedance equals the paralleled impedances of the speakers connected at SPKRS I and SPKRS II (one-half of the impedance of the mid-range speaker). At speaker impedances lower than 3 ohms, power output decreases in direct ratio to the decrease in impedance (electronic protective circuit).



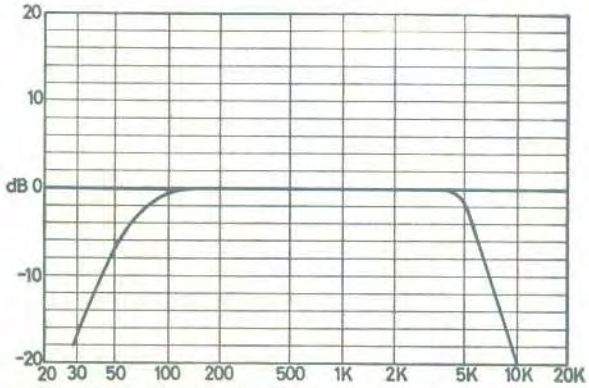
Loudness compensation curves.



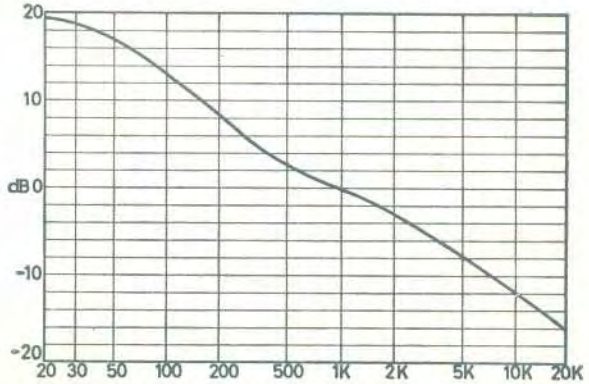
Distortion as a function of power output at 40, 1000, and 15,000 Hz.



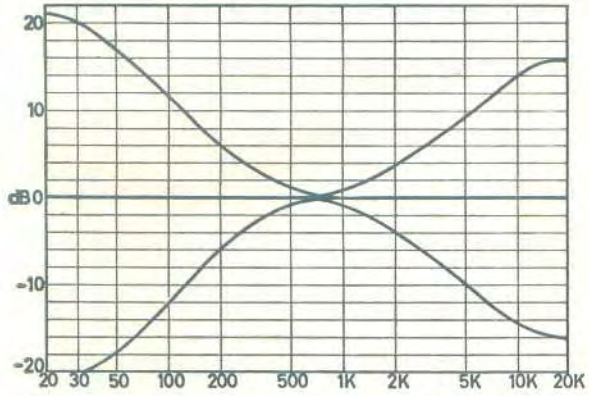
Power output per channel as a function of load resistance (distortion = 0.5%).



Curves of HI and LO filters.



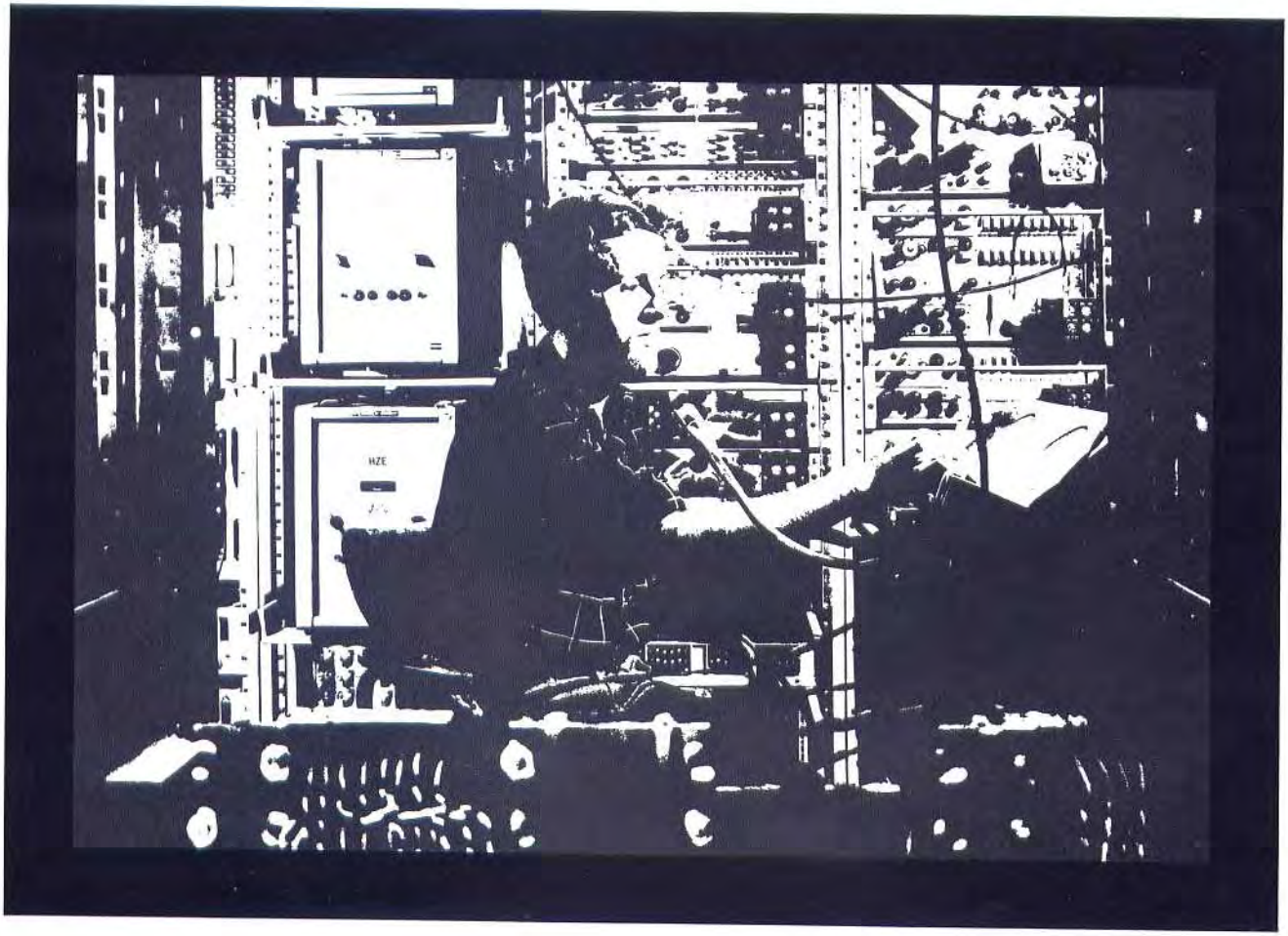
Curves of de-emphasis for magnetic pick-up input (Phono Low IEC 2 Standard).

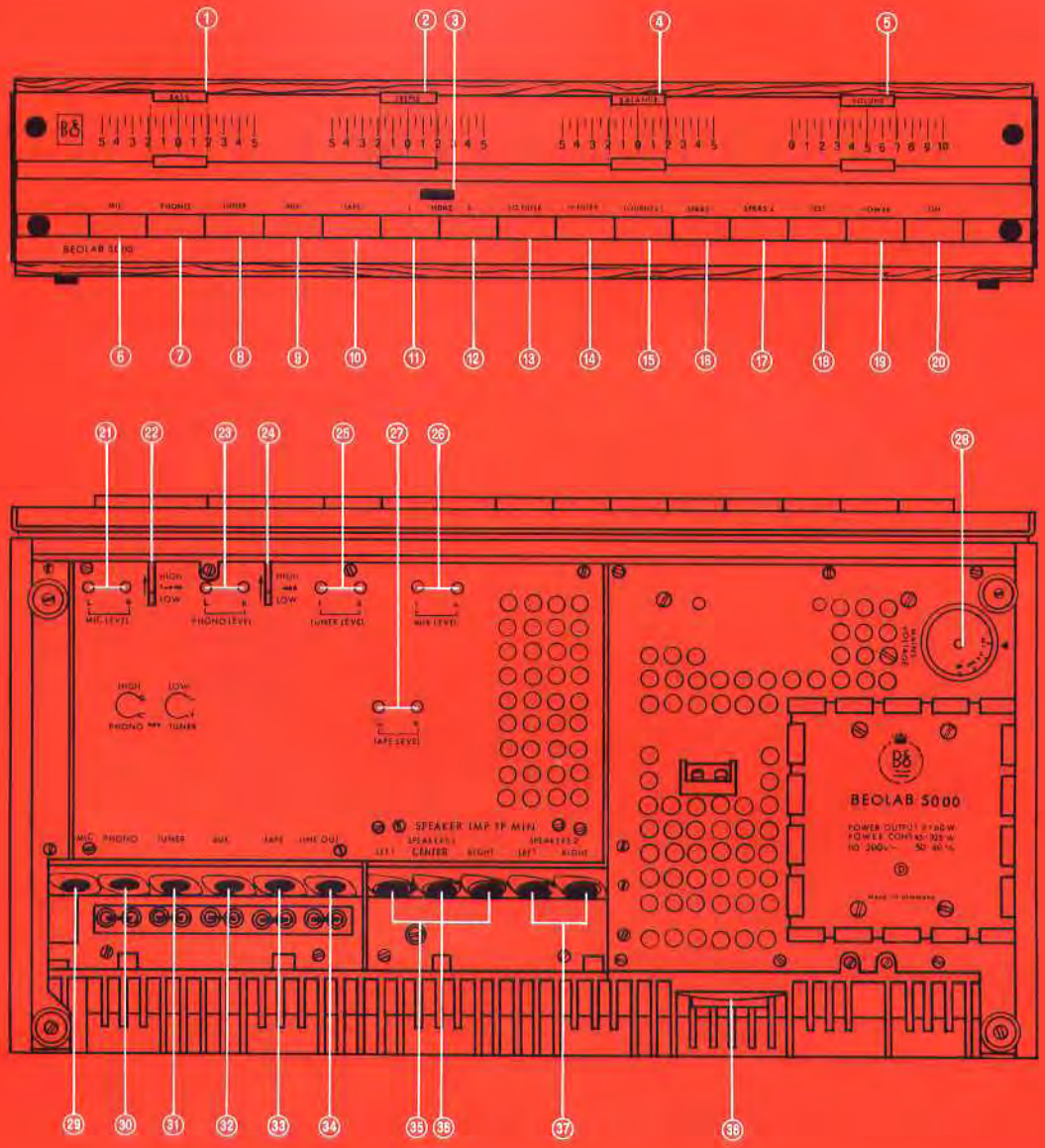


Tone control curves showing max. and min. bass and treble, also linear frequency response.

Transistors:
47.
Pilot Lamps:
Two 60-volt 5-watt dial lamps.
Supply Voltage:
110 - 130 - 220 - 240 volts AC.
Frequency:
50–60 Hz.
Power Consumption:
45–325 watts.
Overload Protection:
Primary: Two surge-resisting fuses (5× 20 mm, 200 mA, 250 volts, government approved).
Secondary: Electronic circuit to protect against overloads and short circuits of speaker outputs.
Weight:
22.8 lb (10.4 kg).
Dimensions:
Length 18½ in. (47 cm), Depth 9⅞ in. (25 cm), Height 3⅞ in. (9.6 cm).

(Subject to change without notice).




BEOLAB 5000
MIC
PHONO
TUNER
AUX
TAPE
HOME
SPEAKER 1
SPEAKER 2
TEST
POWER
MIC LEVEL
PHONO LEVEL
TUNER LEVEL
AUX LEVEL
TAPE LEVEL
HIGH
LOW
SPEAKER IMP. 4Ω MIN.
CENTER
LINE OUT
BEOLAB 5000

BEOLAB 5000

Controls

1 BASS
Accentuates or attenuates the bass range.

2 TREBLE
Accentuates or attenuates the treble range.

3 INDICATOR LAMP
Indicates that the amplifier is switched for stereo operation.

4 BALANCE
Adjusts balance between the two stereo channels.

5 VOLUME
Audio gain control.

6 MIC.
Microphone, 200 ohms.

7 PHONO
Record-player switching between crystal pick-up and magnetic pick-up (see [22] for details).

8 TUNER
FM or other tuner.

9 AUX.
Auxiliary tuner (if used), auxiliary record player or tape recorder with line level output.

10 TAPE
Tape recorder.

11–12 L MONO R
To switch to mono, depress both buttons. For left, depress L. For right, depress R. When both buttons are released (out), the amplifier is switched for stereo operation.

13 LO FILTER
Filter to attenuate the bass range (rumble filter).

14 HI FILTER
Filter to attenuate the treble range (scratch filter).

15 LOUDNESS
Cuts in the aurally compensated volume control. This control circuit provides balance between bass, mid-range, and treble according to the sensitivity of the ear.

16–17 SPKRS 1 AND SPKRS 2
Provides choice of two simultaneously connected speaker systems.

18 TEST
For checking balance between channels.

19 POWER
Power on/off push-button. Lamp (20) shows light when power is applied.

20 ON
Lamp to indicate when power is applied.

External Connections

21–23–25–26–27 LEVEL ADJUSTMENT
Adjustment of input level and balance.

22 PHONO- HIGH–LOW
Switch. HIGH is for crystal pick-up and magnetic pick-up **with** pre-amplifier. LOW is for magnetic pick-up **without** pre-amplifier.

24 TUNER, HIGH–LOW
Switch for attenuating signal from tuner. HIGH is for strong signals. LOW is for weak signals.

28 VOLTAGE SELECTOR
For switching the Beolab 5000 to your local mains voltage.

29 MIC.
Jack for 200-ohm microphone, balanced.

30 PHONO
Record player. Provision for switching between crystal pick-up and magnetic pick-up; see (22) below.

31 TUNER
FM or other tuner. Provision for switching between loud signal and weak signal; see (24) below.

32 AUX.
Auxiliary input. For use with auxiliary radio set, record player, or tape recorder.

33 TAPE
Tape recorder. DIN jack permits both recording and playback. Phone jack is for playback only.

34 LINE OUT
Output for tape recorder. For recording from the Beolab 5000.

35–36 SPEAKERS 1
Left speaker plugs into jack L and right speaker into jack R. A mid-range speaker may be plugged into the centre jack but must be attenuated with respect to the other speakers.

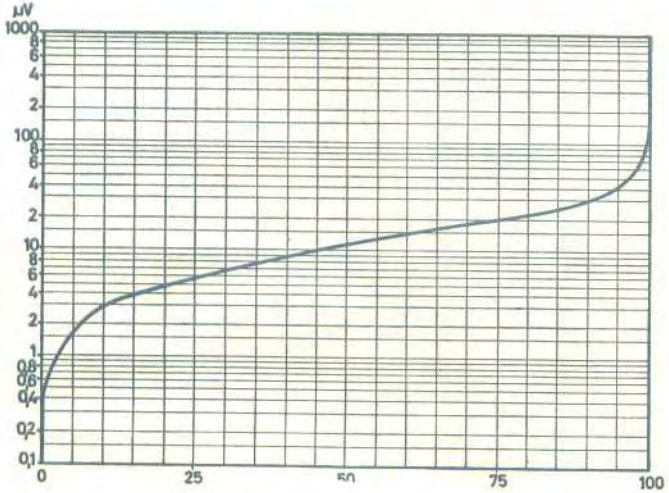
37 SPEAKERS 2
For an extra set of speakers.

38 POWER CONNECTOR
The power plug of the tuner (or other accessories) may be inserted here. The power switch of the Beolab 5000 will then control this equipment as well.

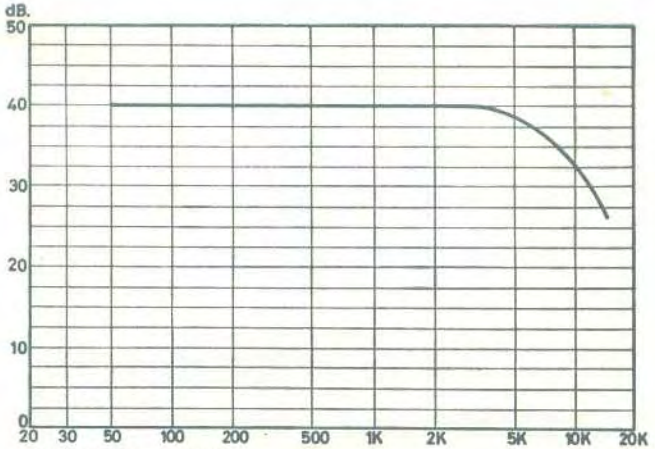
BEOMASTER 5000

The Beomaster 5000 Stereo FM Tuner has excellent sensitivity and selectivity. It incorporates a low-distortion multiplex adaptor featuring a high degree of channel separation. It has a 4-stage gang-tuned radio-frequency amplifier, separate oscillator, 5 intermediate-frequency stages, and a wideband ratio detector. Also automatic noise lock, automatic frequency control, and automatic stereo/mono switching. A large tuning meter permits accurate tuning and relative signal-strength indication. An automatic data-processing selector circuit switches from mono to stereo when the signal-to-noise ratio permits stereo reception (and if the set is tuned to a stereo broadcast). Moreover, it automatically cuts out the signal if the field strength drops below the critical level – and between channels, during tuning.

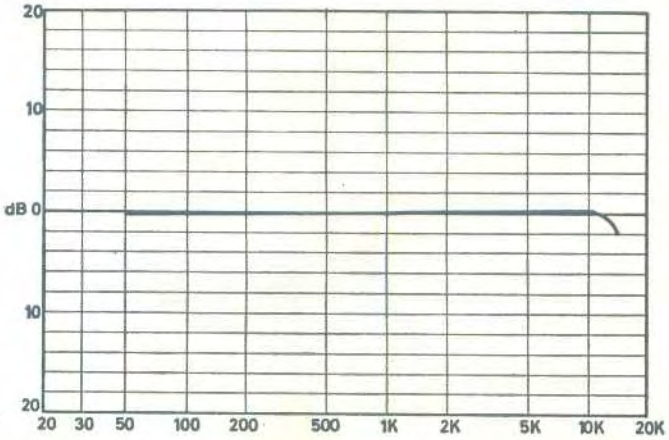
The automatic frequency control circuit ensures that the set stays accurately tuned at all times. – The high sensitivity of the Beomaster 5000 is due to multi-stage radio-frequency and intermediate-frequency amplifiers, and its knife-edge selectivity is the product of no less than 12 tuned intermediate-frequency circuits. A large sliderule tuning scale with station markers ensures easy and rapid tuning.



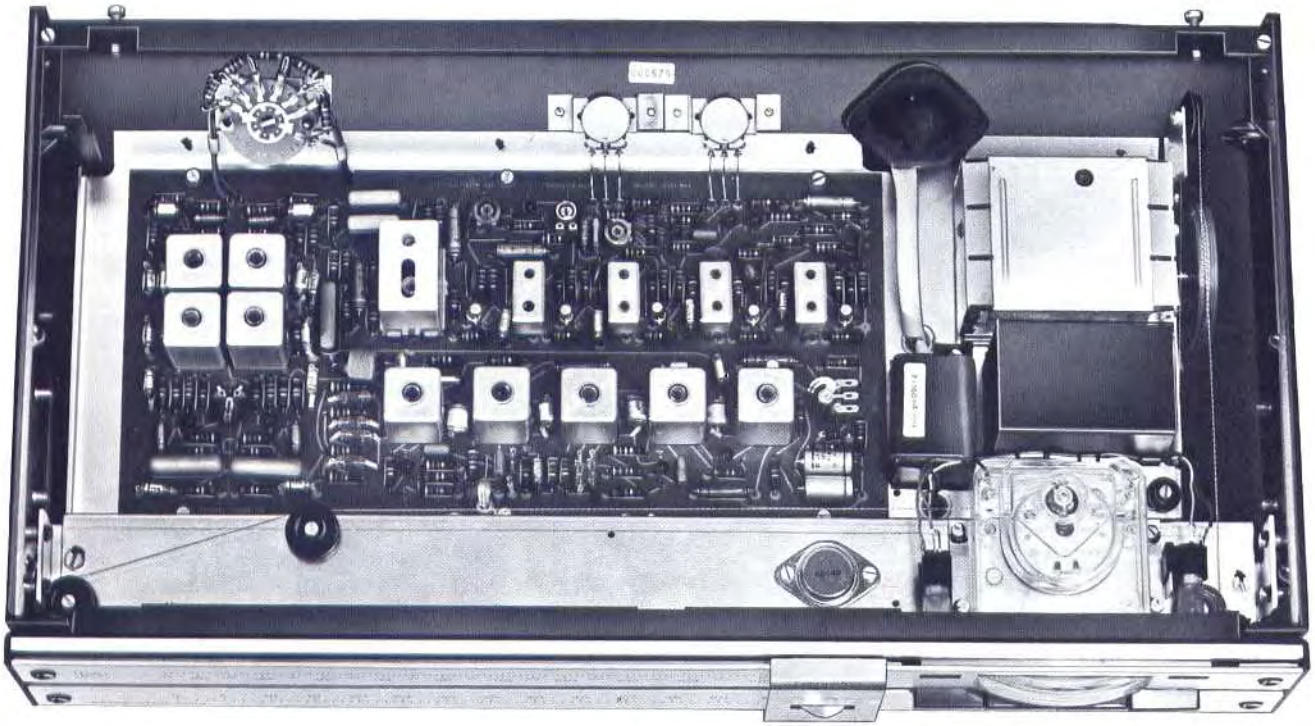
Incoming signal as function of deflection of the tuning meter.



Cross-talk on stereo.



Frequency response, mono and stereo.



BEOMASTER 5000

Controls and External Connections

9 POWER
Power on/off push-button. Power is applied when this button is depressed.

7 AFC
Automatic circuit which "locks in" the station of your choice. Operates only when button is depressed.

5 MUTING
This button mutes inter-station noise when depressed.

3 MONO
Combines two stereo signals into one mono signal For use on too-weak stereo signals.

1 DIAL POINTER
True slide-rule tuning control.

2 ROLLER CONTROL
For vernier slide adjustment.

4 INDICATOR LAMP
Indicates that a stereo signal is being received.

6 POINTER INSTRUMENT
Max. deflection indicates correct adjustment of dial pointer.

8 INDICATOR LAMP
Indicates that power is applied.

14 MUTING LEVEL
Selects muting level.

15 STEREO LEVEL
Selects level at which tuner switches automatically from mono to stereo and vice versa.

17 REG. OUTPUT
Regulates level of the signal which is fed to the amplifier.

13 VOLTAGE SELECTOR
For switching the Beomaster 5000 to your local mains voltage.

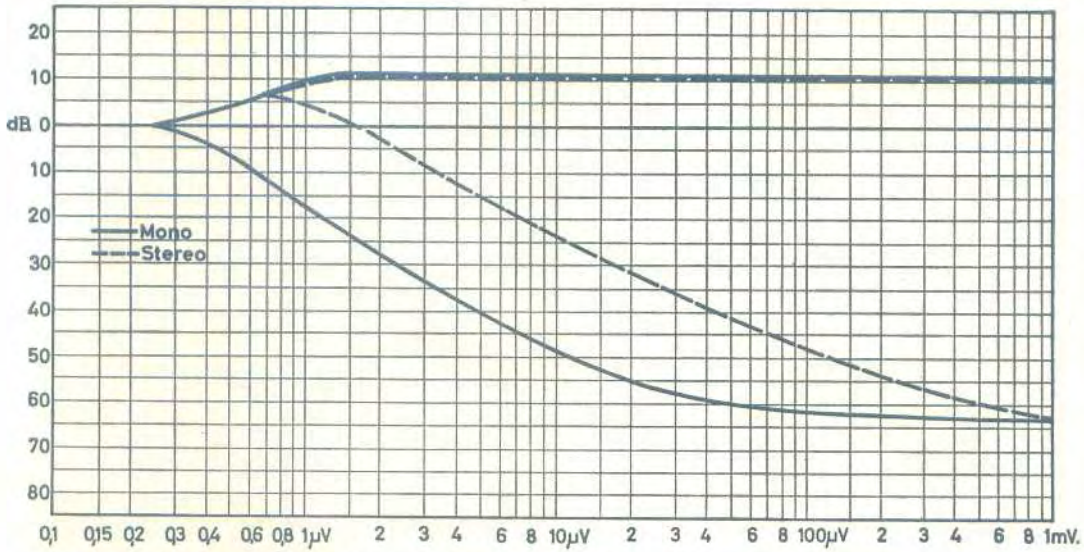
10 AERIAL
For 300-ohm aerial.

11 AERIAL
For 75-ohm aerial.

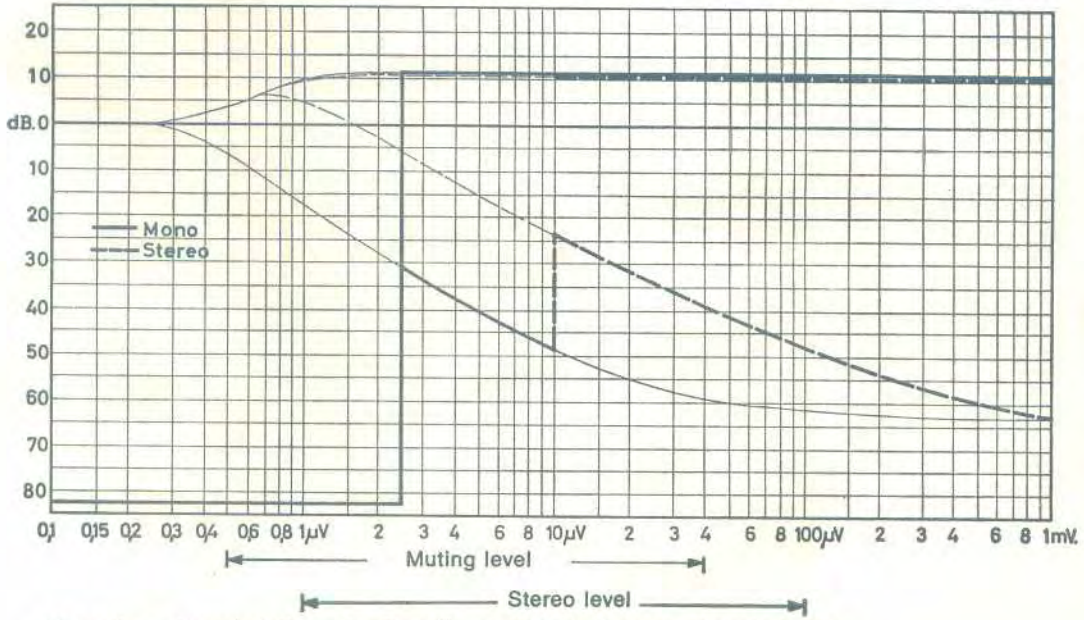
12 AERIAL
For use when the Beomaster 5000 is operated in the immediate vicinity of a transmitter. This jack attenuates the incoming signal, thereby preventing distortion due to excessively strong signals.

16–18 AMPLIFIER
Jacks for RCA or DIN plugs from amplifier.

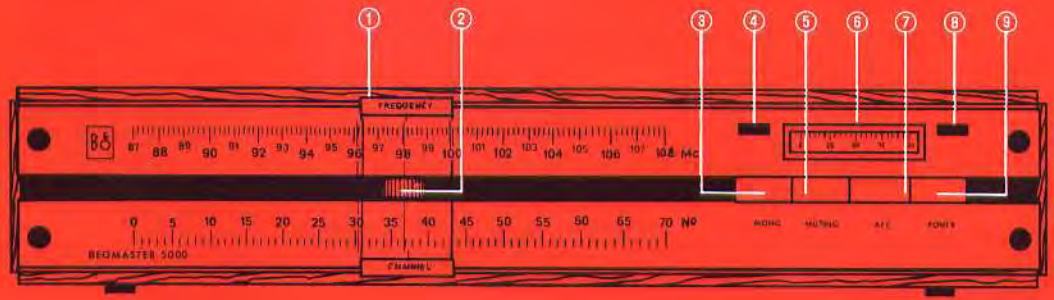
19 TAPE
This jack provides tape recorder output for "off-the-air" recordings.

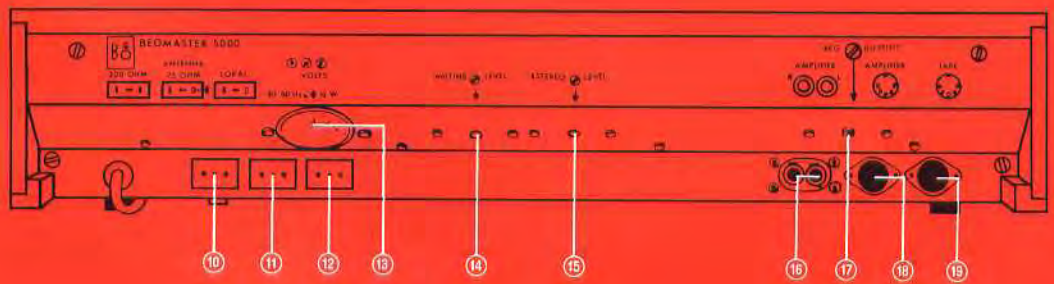


Signal and noise curves, mono and stereo, as functions of incoming signal.



Operating characteristics of automatic muting and stereo control circuits.


1
2
3
4
5
6
7
8
9
FREQUENCY
87 88 89 90 91 92 93 94 95 96 97 98 99 100 101 102 103 104 105 106 107 108 Mc
0 5 10 15 20 25 30 35 40 45 50 55 60 65 70 No
MONO
MUTING
AFC
POWER
BEOMASTER 5000
CHANNEL


BEOMASTER 5000
ANTENNA
300 OHM
75 OHM
LOCAL
VOLTS
MUTING LEVEL
STEREO LEVEL
AMPLIFIER
AMPLIFIER
TAPE
10
11
12
13
14
15
16
17
18
19

TECHNICAL DATA BEOMASTER 5000

(Data listed are minimum values)	
Tuning range:	87–108 Mc/s
20 dB signal/noise ratio: 1000 Hz, 75 kHz swing	0.8 μV
Usable sensitivity (IHFM standard) noise and distortion less than 3%	1.5 μV
Limiting: 3 dB	1.5 μV
Signal to noise ratio: 1000 Hz, 75 kHz swing 100 μV	75 dB
Distortion: 1000 Hz, 40 kHz swing, 100 μV	0.4%
AM suppression: 100 μV	52 dB
Capture ratio:	2 dB
IF bandwidth: 3 dB	300 kHz
Detector bandwidth:	1 mHz
Stereo cross-talk attenuation: 1000 Hz	40 dB
Pilot and carrier suppression:	50 dB
Frequency response: 20 Hz – 15 kHz, stereo, mono	±2 dB
Channel difference: output	±2 dB

Aerial connection facilities: 75 ohms, 300 ohms and local.
Output level for amplifier: adjustable from 55 mV to 1 V.
Output level for tape recorder: 100 mV for 75 kHz swing.
4-stage gang-tuned RF section with separate oscillator.
AFC (automatic frequency control).
Automatic stereo-mono switching.
Switching level is adjustable between 0 and 100 μV.
Muting (removes inter-station hiss). Muting level is adjustable for signal strengths between 0 and 40 μV.
Precision meter for accurate tuning.
Stereo indicator. Automatically indicates the presence of stereo signals.
25 tuned circuits.
22 transistors, 20 diodes.
Pilot Lamps: Two 19 V, 1,9 W·dial lamps.
Supply voltage: 110, 130, 220, 240 V AC.
Frequency: 50–60 Hz.
Power consumption: 12 W.
Fuses: 2.5×20 mm 160 mA. 250 V government approved.
Weight: 6 kg.
Dimensions: length 18½ in. (47 cm), depth 9⅞ in (25 cm), height 3⅞ in (10 cm).

BEOVOX 5000

BEOVOX 5000

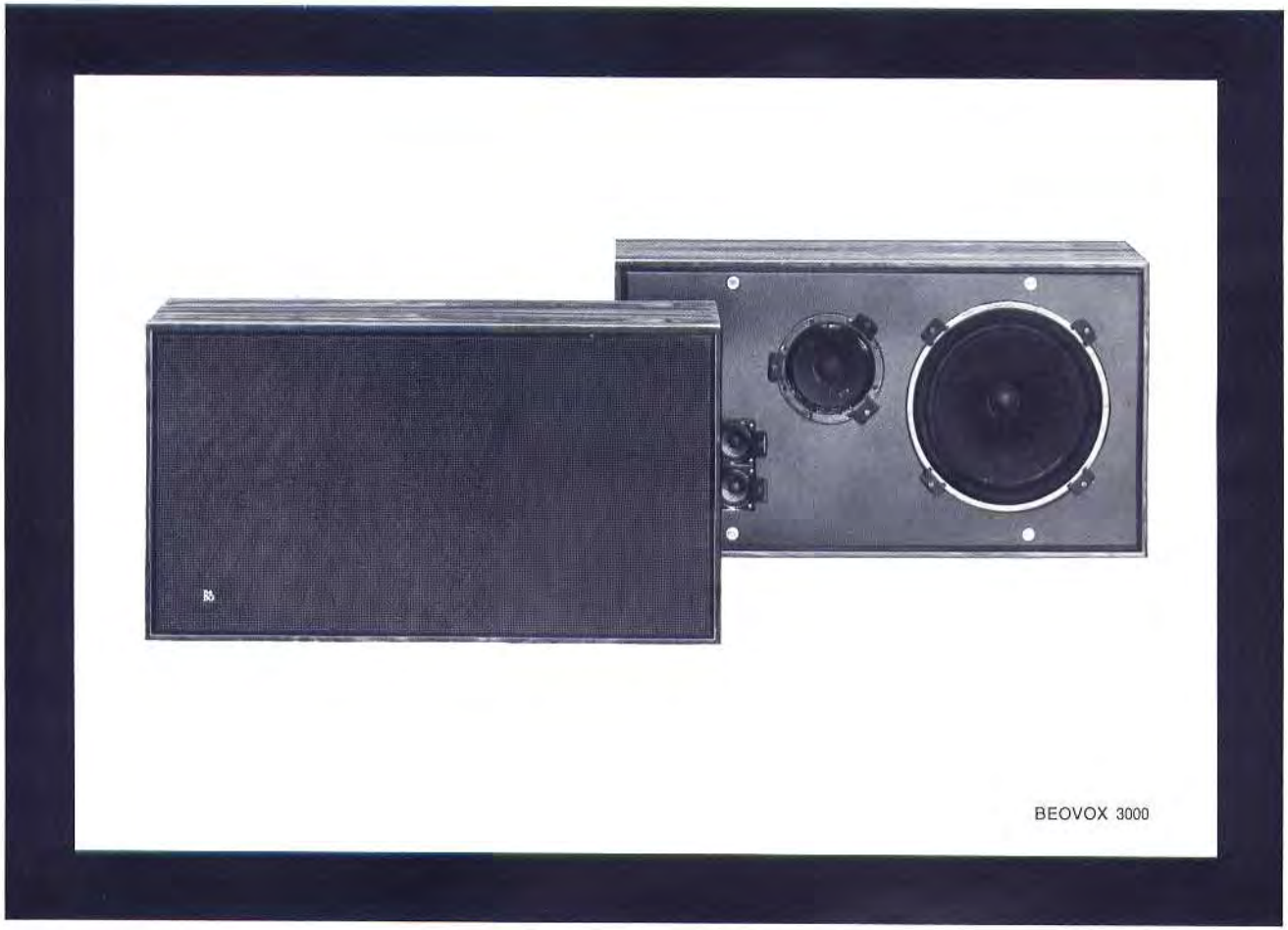
Pressure-chamber loudspeaker with specially designed bass unit featuring extended bass reproduction range, two mid-range speakers, and four high-frequency speakers. These seven units are between them capable of handling as much as 50 watts of power. Incorporates crossover network and provision for individual adjustment of mid-range and highfrequency levels. Also provision for connection of high-frequency diffuser.

BEOVOX 3000

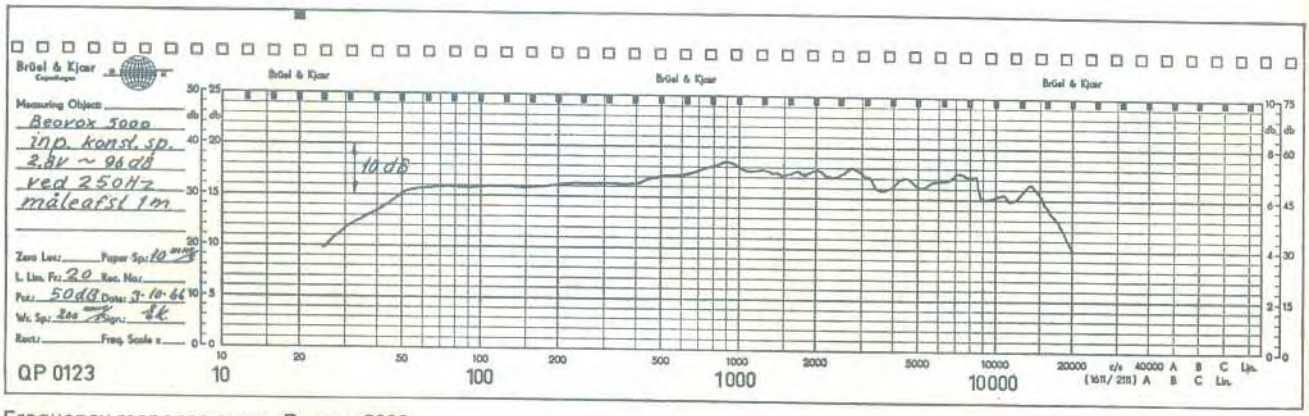
Pressure-chamber loudspeaker with specially designed bass unit, separate mid-range speaker, and two high-frequency speakers – a total of four units. Crossover network and provision for individual adjustment of mid-range and high-frequency levels. Also provision for connection of high-frequency diffuser. Maximum power handling capacity is 50 watts.

BEOVOX 2500 CUBE

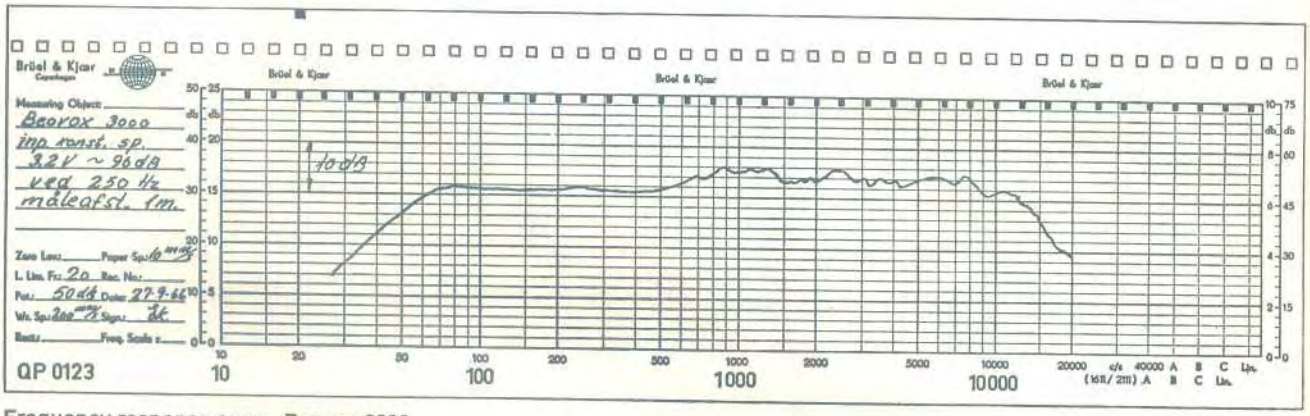
Cube-type high-frequency diffuser with six high-frequency speakers radiating in all directions. For table or wall mounting. May also be suspended from ceiling. The Beovox 2500 ensures complete spatial distribution of the highest notes, and its maximum power handling capacity in the range above 2000 cycles per second is 50 watts.



BEOVOX 3000

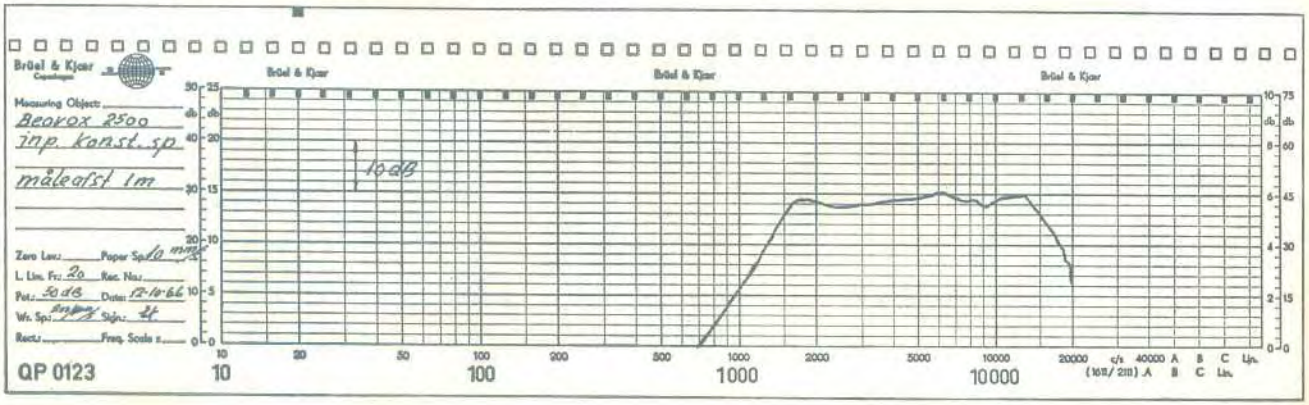


Frequency response curve, Beovox 5000



Frequency response curve, Beovox 3000

Frequency response curve, Beovox 2500 Cube



BEOVOX 2500 CUBE

BEOVOX 5000, TECHNICAL DATA

Type No. 6206.

Performance Data:

Frequency Response (DIN 45570): 30–18,000 Hz.
Music Load: 60 watts.
Continuous Load (DIN 45573): 30 watts.
Angle of Dispersion: 120 degrees.
Distortion (DIN 45403): 2.2% max.
Sensitivity (DIN 45573): 2.0 watts.

Description:

Weight: 73 lbs (23 kgs.).
Dimensions, H×W×D: $28^{4}/_{5} \times 18^{1}/_{2} \times 13$ ins. (73×47×32.5 cm.)
Number of Speaker Units: 7.
Resonance of Bass Unit: 20–24 Hz.
Cubic Content: 66 litres.
Cable Length (with DIN standard plugs): 4 metres.
Impedance: 4 ohms.
Crossover Frequencies: 800/5000 Hz.
Special Features: mid-range and high-frequency adjustment.

BEOVOX 3000, TECHNICAL DATA

Type No. 6210.

Performance Data:

Frequency Response (DIN 45570): 38–18,000 Hz.
Music Load: 50 watts.
Continuous Load (DIN 45573): 25 watts.
Angle of Dispersion: 100 degrees.
Distortion (DIN 45403): 2.5% max.
Sensitivity (DIN 45573): 2.6 watts.

Description:

Weight: 33 lbs (15 kgs.).
Dimensions: H×W×D: $13^{4}/_{5} \times 25^{3}/_{5} \times 11$ ins. (35×65×28 cm.)
Number of Speaker Units: 4.
Resonance of Bass Unit: 26–34 Hz.
Cubic Content: 40 litres.
Cable Length (with DIN standard plugs): 4 metres.
Impedance: 4 ohms.
Crossover Frequencies: 800/5000 Hz.
Special Features: mid-range and high-frequency adjustment.

BEOVOX 2500 CUBE, TECHNICAL DATA

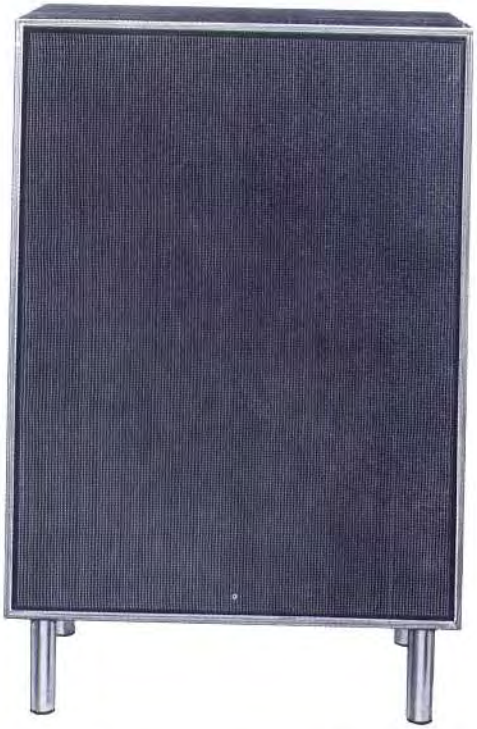
Type No. 6211.

Performance Data:

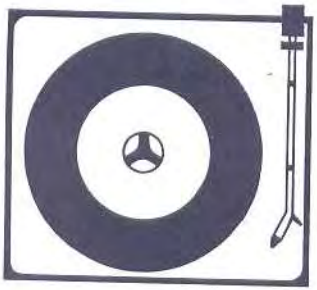
Frequency Response (DIN 45570): 2000–18,000 Hz.
Music load: 50 watts.
Angle of Dispersion: 360 degrees.
Distortion (DIN 45403): 1% max.

Description:

Weight: 3.52 lbs. (1.6 kg).
Dimensions, H×W×D: $3^{3}/_{4} \times 3^{3}/_{4} \times 3^{3}/_{4}$ ins. (9.5×9.5×9.5 cm).
Number of Speaker Units: 6.
Cable Length (with DIN standard plugs): 6 metres.
Impedance: 4 ohms.
Crossover Frequencies: 800/5000 Hz.
Special Features: mid-range and high-frequency adjustment.



However, a high-fidelity system in this class should also include a stereo record player and an advanced high-fidelity tape recorder. The Beogram 3000 Record Player, a result of co-operation between Acoustical NV of Holland and B&O, is specifically designed for this purpose. Suitable tape recorders are the B&O Beocord 1500 de Luxe and the B&O Beocord 2000 de Luxe with built-in 4-channel mixer section and twin faders (the Beocord 2000 de Luxe meets international standards for studio tape recorders with respect to speeds, wow, and flutter).



INDIVIDUAL TEST CERTIFICATE

The technical specifications list a large number of data all of which represent minimum values. An individual TEST CERTIFICATE is made out for each unit of the Beolab 5000 series. This certificate accompanies the unit, listing the exact results of measurements on that particular unit.

The following instruments were used for measurements on the Beolab 5000:

Radiometer Type HO 32 Beat-Frequency Oscillator,

Hewlett Packard Type 333 A Distortion Analyzer,

Type PM 3230 Oscilloscope.

These instruments were used for the Beomaster 5000:

Boonton Type 202 H FM-AM Signal Generator,

Boonton Type 219 A FM Stereo Modulator,

Hewlett Packard Type 333 A Distortion Analyzer.

BEOLAB 5000

HIGH-FIDELITY